AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph starting at page 4, line 2 and ending on line 11 as follows:

As described above, in the conventional technologies, ~~since~~ the resolution of a photographed image is determined according to a preset image size. Further, since the number of frames to be processed per second, and the like are uniquely determined by the read-out time of an image pickup element, the processing time of an image compression unit, and the data transfer rate of a recording unit and the like, in the conventional system, a resolution and a frame rate ~~can not~~ cannot be selected on a camera side.

Please amend the paragraph starting at page 6, line 27 and ending at page 7, line 23 as follows:

In Fig. 1, reference numeral 1 denotes an image pickup element for converting optical information into an electric signal, 2 denotes a read-out processing unit for reading out an image signal from the image pickup element 1, 3 denotes an ACG and A/D conversion unit for subjecting the read out image signal to gain correction and then converting the image signal into digital data, 4 denotes a correction conversion unit [[4]] for subjecting the read out digital data to correction processing such as γ correction and the like and converting the digital data into image data in a luminance color difference form (Y,Cr,Cb), 5 denotes an effect synthesization unit for subjecting the image data processed by the correction conversion unit 4 to arithmetic operation so that the image data is added with an image effect, 6 denotes a work memory composed of a RAM

and the like for temporarily storing the processed data in the respective units 3 to 5, and 10 denotes a camera unit composed of the respective units 1 to 6 and a ROM 7 which will be described later. Note that the ROM 7 stores information as to the image processing capability (photographing capability) of the camera unit 10.

Please amend the paragraph starting at page 8, line 13 and ending at page 9, line 2 as follows:

Further, reference numeral 50 denotes an output unit for outputting the compressed image data subjected to the compression-encoding processing in the encoding processing unit 30, 51 denotes a recording unit for recording the compressed image data output from the ~~recording~~ output unit ~~51~~ 50, and 52 denotes an external input output terminal for inputting and outputting the compressed image data output from the output unit 50, other necessary control information, and the like from and to the outside. An external recording unit, monitor, personal computer (PC), server, and the like are connected to the external input output terminal 52. Reference numeral 53 denotes a state detection unit for detecting the state of the recording unit 51 and the state of the external recording unit and the like connected to the external input output terminal 52.

Please amend the paragraph starting at page 10, line 5 and ending at line 20 as follows:

When a predetermined amount of data (for example, an amount of data of an image of one frame) is stored in the work memory 6, the correction conversion unit 4 starts to correct and

convert the digital data stored in the work memory 6. The correction conversion unit 4 sequentially reads out the digital data from the work memory 6, subjects it to photovoltage-conversion correction (γ correction), further subjects the digital data to image data conversion into the luminance and color difference format (Y,Cb, Cr), and outputs the digital data at a timing based on the read-out time of the read-out processing unit 2. The digital data is temporarily stored in the work memory 6 as needed, after the digital data is converted in the correction ~~convertion~~ conversion unit 4.

Please amend the paragraph starting at page 10, line 21 and ending at page 11, line 18 as follows:

The effect synthesization unit 5 starts an operation based on output timing of the correction conversion unit 4. The effect synthesization unit 5 is a section for providing the image data (Y, Cb, Cr data) fetched from the work memory 6 with a better-looking effect by subjecting it to a digital arithmetic operation. When the processing in the correction conversion unit 4 is completed, the effect synthesization unit 5 reads out the YCbCr data from the work memory 6, subjects the data to digital effect processing for making the color of an overall image to sepia by changing the ratio of Y, Cb, Cr or subjects it to an arithmetic operation processing for providing a scene change portion with a wipe effect by synthesizing the digital data with a previous image, and thereafter transfers the image data to the encoding unit 40. Note that the processing in the effect synthesization unit 5 may be optionally executed when it is selected or set by the user. When the processing in the effect synthesization unit 5 is not executed, the image data processed

by the correction conversion unit 4 is read out from the work memory 6 and transferred to the encoding unit 40, bypassing the processing in the effect synthesization unit 5.

Please amend the paragraph starting at page 13, line 7 and ending at line 12 as follows:

Fig. 2 explains the arrangement of pixels in an image pickup element, and Fig. 3 is a block diagram of a camera unit 10′ showing a portion of the arrangement of the camera unit 10 of Fig. 1 in detail. First, a method of reading out the image data will be explained using the block diagram of Fig. 3.

Please amend the paragraph starting at page 15, line 26 and ending at page 16, line 2 as follows:

As described above, ~~since~~ the number of pixels (P) and the read-out time (rate) (T) approximately have the relationship shown by the following expression (1): [[.]]

Please amend the paragraph starting at page 21, line 10 and ending at line 21 as follows:

This embodiment assumes that the encoding unit 40 can deal with the performance of the camera unit 10, i.e., the maximum number of read-out pixels (Pmax) and the shortest frame read-out time (Tmin). That is, the encoding unit 40 is equipped with the size of the work memory 31 and the arithmetic operation capabilities in the respective blocks, which are set such

that a frame image having the number of pixels (P) and the frame read-out time (T), which are uniquely set by the expression (1) according to the performance of the camera unit 10, can be processed [[at]] in real time.

Please amend the paragraph starting at page 26, line 23 and ending at page 27, line 13 as follows:

Since the scalability functions of the JPEG 2000 are set in the order of the packets, even if the encoded data of the respective frames is cancelled halfway, an image having appropriate quality can be decoded. Specifically, since the SN scalability is employed in a motion picture having high image quality and a low rate, even if the encoded data of the respective frames of the image is cancelled halfway, it is possible to reproduce an image having an optimum image quality and the deterioration of the quality of the image can be minimized. In contrast, since the resolution scalability is employed in a motion picture having a low pixel-density and high rate, even if the encoded data of the respective frames of the image is cancelled halfway, it is possible to uniformly ~~reploduce~~ reproduce an entire image, thereby the high rate motion of an object, which can be hardly predicted, can be fetched.

Please amend the paragraph starting at page 30, line 7 and ending at line 13 as follows:

As explained above, since the processing capabilities of the camera unit 10 and the encoding unit 40 are separately stored and held in the ROM in this embodiment, when there is

~~other~~ another compatible camera unit, it is possible to exhibit a maximum capability as a system by comparing its performance in the same manner.

Please amend the paragraph starting at page 30, line 14 and ending at page 31, line 1 as follows:

Further, in the system of this embodiment, since the camera unit 10 can execute partial read-out, and the like, the user can select the photographing mode. However, when ~~other~~ another high pixel-density camera unit, which cannot ~~executed~~ execute the partial read-out, and the like, is combined with the encoding unit 40 described above, the code stream is automatically generated in the resolution priority mode, and when a low pixel-density camera unit, which can execute read-out at a high rate, is combined with the encoding unit 40 inversely, the code stream is automatically generated in the high rate fetching priority mode, and the system can generate the code stream in an optimum mode without the need of selection made by the user.

Please amend the paragraph starting at page 33, line 21 and ending at line 25 as follows:

Next, the control unit 60 sets the number of pixels (P) and the frame processing time (T), which are automatically set from the camera unit 10, to the encoding unit 40 (step S1004), and thereby the setting processing in the camera unit 10 is completed.

Please amend the paragraph starting at page 34, line 9 and ending at line 24 as follows:

Here, at the final step of the image compression processing, the packets are rearranged as described below by the determination of the control unit 60. First, the control unit 60 determines the frame processing time (T) (step S1060). When the determination at step S1060 is "No", i.e., when it is determined that frame processing time (T) is 1/30 sec or more, the code stream is generated such that the packets of the JPEG 2000 are arranged in correspondence to the SN scalability (step S1070). In contrast, when the determination at step S1060 is "Yes", i.e., when it is determined that frame processing time (T) is less than 1/30 sec, the code stream is generated such that the packets of the JPEG 2000 are arranged in correspondence to the resolution scalability (step S1072).